

We Claim:

1. A clamp assembly for securing a first article to a second article, said clamp assembly comprising:

first and second spaced-apart article holders adapted for engaging respective first and second articles;

an elongated gear rack interconnecting said first and second article holders;

a pinion operatively engaging said gear rack, and adapted for moving said first article holder along said gear rack relative to said second article holder;

a locking bar comprising a plurality of spaced teeth adapted for meshing with respective teeth of said gear rack in a locked position; and

means for moving said locking bar between the locked position and a released position, such that:

(i) in the locked position, the meshing teeth of said locking bar and gear rack cooperate to prevent linear movement of said first article holder relative to said second article holder, thereby securing the first article to the second article; and

(ii) in the released position, the teeth of said locking bar and gear rack are sufficiently disengaged to allow free linear movement of the first article holder along said gear rack relative to the second article holder.

2. A clamp assembly according to claim 1, and comprising a hand knob adapted for rotating said pinion to move said first article holder relative to said second article holder.

3. A clamp assembly according to claim 1, and comprising a gear housing fixed to said first article holder, and defining a through channel for accommodating linear movement of said housing along a length of said gear rack.

4. A clamp assembly according to claim 3, wherein said gear housing comprises biasing means for normally urging said locking bar into the locked position.

5. A clamp assembly according to claim 4, and comprising a release arm connected to said locking bar and adapted for being pulled against the force of said biasing means to disengage said locking bar from the locked position.

6. A clamp assembly according to claim 5, wherein said release arm and said gear housing define respective holes which align in the locked position to receive a locking member, said locking member operating to hold said locking bar in the locked position.

7. A clamp assembly according to claim 6, wherein said locking member comprises a padlock.

8. A clamp assembly according to claim 1, wherein said locking bar comprises more than 2 teeth.

9. A clamp assembly according to claim 1, wherein each of said first and second article holders comprises a generally U-shaped channel.

10. A clamp assembly according to claim 1, wherein each of said first and second article holders has a length dimension greater than two times its width dimension.

11. In combination with a ladder rack adapted for mounting on a vehicle, a clamp assembly for securing a ladder to said ladder rack, said clamp assembly comprising:

first and second spaced-apart holders adapted for engaging the ladder and said ladder rack, respectively;

an elongated gear rack interconnecting said first and second holders;

a pinion operatively engaging said gear rack, and adapted for moving said first

holder along said gear rack relative to said second holder;

a locking bar comprising a plurality of spaced teeth adapted for meshing with respective teeth of said gear rack in a locked position; and

means for moving said locking bar between the locked position and a released position, such that:

(i) in the locked position, the meshing teeth of said locking bar and gear rack cooperate to prevent linear movement of said first holder relative to said second holder, thereby securing the ladder to said ladder rack; and

(ii) in the released position, the teeth of said locking bar and gear rack are sufficiently disengaged to allow free linear movement of the first holder along said gear rack relative to the second holder.

12. A combination according to claim 11, and comprising a hand knob adapted for rotating said pinion to move said first holder relative to said second holder.

13. A combination according to claim 11, and comprising a gear housing fixed to said first holder, and defining a through channel for accommodating linear movement of said housing along a length of said gear rack.

14. A combination according to claim 13, wherein said gear housing comprises biasing means for normally urging said locking bar into the locked position.

15. A combination according to claim 14, and comprising a release arm connected to said locking bar and adapted for being pulled against the force of said biasing means to disengage said locking bar from the locked position.

16. A combination according to claim 15, wherein said release arm and said gear housing define respective holes which align in the locked position to receive a locking member, said locking member operating to hold said locking bar in the locked position.

17. A combination according to claim 16, wherein said locking member comprises a padlock.

18. A combination according to claim 11, wherein said locking bar comprises more than 2 teeth.

19. A combination according to claim 11, wherein each of said first and second article holders comprises a generally U-shaped channel.

20. A method for securing a ladder to a vehicle ladder rack, said method comprising the steps of:

(a) placing the ladder on the vehicle ladder rack such that a rung of the ladder is located adjacent a lateral crossbar of the vehicle ladder rack;

(b) applying a first generally U-shaped holder of a clamp assembly to the rung of the ladder;

(c) applying a second generally U-shaped holder of the clamp assembly to the lateral crossbar of the vehicle ladder rack; and

(d) bringing the first and second holders of the clamp assembly together into a locked position to secure the ladder to the ladder rack.